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ABSTRACT

The relationship between national population trends and teacher supply and demand is investigated, and guidelines for local teacher association planning are presented. (LH)

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Population Trends and Their Implications for Association Planning, 1979

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POPULATION TRENDS AND THEIR IMPLICATIONS FOR ASSOCIATION PLANNING, 1979

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POPULATION TRENDS AND THEIR IMPLICATIONS FOR ASSOCIATION PLANNING, 1979

- *The number of annual births was 3.3 million in U.S. fiscal year 1977 and in 1978–up by 150,000 from the 3.15 million each year between 1973 and 1976.*
- *The number of annual births is projected to increase 150,000 annually between fiscal 1979 and 1981, 100,000 in 1982, 50,000 in 1983 and in 1984, 30,000 in 1985 and in 1986, and less than 15,000 in 1987 before beginning to decline again each year beginning in 1989.*
- *The states differ widely in the change in the number of births in 1978 from the number born in 1973. The number is down by at least 4.0 percent in the District of Columbia, Georgia, Maine, Massachusetts, New Jersey, New York, and Rhode Island; while the number is up by at least 15.0 percent in Alaska, California, Idaho, Montana, Nevada, North Dakota, Oregon, Utah, Washington, and Wyoming.*
- *The number of public school teachers is projected to continue to decrease each year until 1983.*
- *The number of persons ages 18 to 21 is projected to reach a peak of 17,156,000 in 1979, then an era of annual decreases will begin that will end in 1994 when 12,972,000 persons will be in this age group.*
- *Barring further reductions in the attractiveness of jobs for beginning teachers, there is little likelihood of a teacher shortage during the next decade.*

National Population Trends

Wide differences in the local status and rates of change in birth rates and population migration have contributed to severe enrollment declines in some school systems while enrollment in others continues to grow. Because the national estimates indicate an overall reduction in the total number of jobs for teachers and higher education faculty, immediate and informed planning is needed to correct the resultant problems facing education and the teaching profession.

Trends among school-age populations. The 3,111,000 births in fiscal 1974 were the lowest in any year since 1946. The numbers born each year between 1973 and 1976 have been less than 3.2 million. The number of births increased to 3.3 million in fiscal 1977 and remained at that level in 1978. However, the number of children born each year will probably increase until 1988, despite a continuation of relatively low birth rates. The number of births during the 12 months ending with February 1979 is up by 52,000 over the previous 12-month period. Except for the moderate increase in the numbers born between 1969 and 1971, the number of children born each year decreased annually between 1961 and 1974.

The outcome (reported in 1977 projections by the U.S. Bureau of the Census and shown in Table 1) is that for the nation as a whole the number of age 5-17 children will decrease annually between 1971 and at least 1984. In 1985 the number of age 5-17 children and youth will begin to increase moderately every year until the year 2000.

TABLE 1.–NUMBER OF PERSONS IN SELECTED AGE GROUPS PROJECTED TO THE YEAR 2000

Year (July)	Ages 5-13		Ages 14-17		Ages 5-17		Ages 18-21	
	Number (000)	Percent change	Number (000)	Percent change	Number (000)	Percent change	Number (000)	Percent change
1	2	3	4	5	6	7	8	9
1968	36,804	0.5	15,173	3.0	51,977	1.2	14,529	5.8
1969	36,836	0.1	15,560	2.6	52,396	0.8	14,426	–0.7
1970	36,636	–0.5	15,910	2.2	52,546	0.3	14,707	1.9
1971	36,105	–1.4	16,281	2.3	52,386	–0.3	15,019	2.1
1972	35,458	–1.8	16,557	1.7	52,015	–0.7	15,437	2.8
1973	34,737	–2.0	16,748	1.2	51,485	–0.1	15,795	2.3
1974	34,072	–2.0	16,880	0.8	50,952	–0.1	16,110	2.0
1975	33,440	–1.9	16,934	0.3	50,374	–1.1	16,484	2.3
1976	32,962	–1.4	16,893	–0.2	49,855	–1.0	16,767	1.7
1977	32,227	–2.2	16,783	–0.7	49,010	–1.7	16,956	1.1
1978	31,384	–2.6	16,648	–0.8	48,032	–2.0	17,106	0.9
1979	30,641	–2.4	16,272	–2.3	46,913	–2.3	17,156	0.3
1980	30,197	–1.4	15,763	–3.1	45,960	–2.0	17,117	–0.2
1981	29,804	–1.3	15,219	–3.5	45,023	–2.0	17,018	–0.6
1982	29,543	–0.9	14,656	–3.7	44,199	–1.8	16,874	–0.8
1983	29,334	–0.7	14,309	–2.4	43,643	–1.3	16,499	–2.2
1984	29,175	–0.5	14,261	–0.3	43,436	–0.5	15,989	–3.1
1985	29,098	–0.3	14,392	0.9	43,490	0.1	15,442	–3.4
1986	29,475	1.3	14,295	–0.7	43,770	0.6	14,873	–3.7
1987	30,142	2.3	13,965	–2.3	44,107	0.8	14,521	–2.4
1988	30,945	2.7	13,480	–3.5	44,425	0.7	14,470	–0.4
1989	31,715	2.5	12,996	–3.6	44,711	0.6	14,601	0.9
1990	32,568	2.7	12,771	–1.7	45,339	1.4	14,507	–0.6
1991	33,382	2.5	12,791	0.2	46,173	1.8	14,179	–2.3
1992	34,113	2.2	12,982	1.5	47,095	2.0	13,685	–3.5
1993	34,712	1.8	13,228	1.9	47,940	1.8	13,198	–3.6
1994	35,140	1.2	13,681	3.4	48,821	1.8	12,972	–1.7
1995	35,392	0.7	14,226	4.0	49,618	1.6	12,995	0.2
1996	35,513	0.3	14,778	3.9	50,291	1.4	13,184	1.5
1997	35,531	0.1	15,262	3.3	50,793	1.0	13,432	1.9
1998	35,457	–0.2	15,631	2.4	51,088	0.6	13,887	3.7
1999	35,303	–0.4	15,879	1.6	51,182	0.2	14,435	3.9
2000	35,080	–0.6	16,045	1.0	51,125	–0.1	14,990	3.8

SOURCES:

1967–1969 U.S. Department of Commerce, Bureau of the Census. *Estimates of the Population of the United States by Age, Sex, and Race: April 1, 1960 to July 1, 1973.* Current Population Reports, Series P-25, No. 519. Washington, D.C.: Government Printing Office, 1974. 79 pp.

1970–1977 U.S. Department of Commerce, Bureau of the Census. *Estimates of the Population of the United States by Age, Sex, and Race: 1970 to 1977.* Current Population Reports, Series P-25, No. 721. Washington, D.C.: Government Printing Office, April 1978. 47 pp.

1976–2000 U.S. Department of Commerce, Bureau of the Census. *Projections of the Population of the United States: 1977 to 2050.* Current Population Reports, Series P-25, No. 704. Washington, D.C.: Government Printing Office, 1977. 87 pp.

Estimates are as of July 1 of the listed year and include Armed Forces overseas. Projections are Series II.

The age 18-21 population will peak at 17.2 million persons this year, but next year it will begin an era of annual decreases that will last until 1995.

The rates of decrease in the numbers of these population groupings will not be constant. The most severe drop in the age 5-17 population will be between 1975 and 1983, with annual decreases ranging between 1.0 and 2.3 percent. Only in 1978, 1979, 1980, and 1981 will the annual decreases equal or exceed 1.9 percent of the previous year's age 5-17 population. The age 5-13 group dropped or will drop between 2.0 and 2.6 percent in 1973, 1974, and 1977 through 1979. The age 14-17 group will decrease annually from 1976 through 1990, except in 1985 when there will be a small increase of 130,000 over 1984. The years in which the percentage drop in the age 14-17 population will exceed 2.0 percent are from 1979 through 1983 and from 1987 through 1989. The annual decrease will be over 3 percent in 1980 through 1982, 1988, and 1989. The largest percentage decrease will be in 1982, when a drop of 550,000 youth will be a reduction of 3.7 percent in the number in 1981.

The age 18-21 population will decline by 2.0 percent or more annually between 1983 and 1987 and between 1991 and 1993. In 1994 this age group will reach its lowest number since 1969 (when it was 14,426,000), when it will decline to 12,972,000. The drop of 4.2 million persons in this age group between its peak size of 17,156,000 in 1979 to the 1994 low is about one-fourth (24.4 percent) of the total in this age group in 1979.

TABLE 2.–CLASSROOM TEACHERS IN GRADES K-12 AND FULL-TIME FACULTY HAVING RANK OF INSTRUCTOR OR ABOVE IN ALL INSTITUTIONS OF HIGHER EDUCATION, 1970 TO 1986

Year (fall)	Total teachers K-12		Public school teachers, K-12		Higher education faculty[a]	
	Number (000)	Percent change	Number (000)	Percent change	Number (000)	Percent change
1	2	3	4	5	6	7
1970	2,288	2.1	2,055	2.1	369	5.4
1971	2,294	0.3	2,063	0.4	379	2.7
1972	2,338	1.9	2,103	1.9	380	0.3
1973	2,376	1.6	2,138	1.7	389	2.4
1974	2,404	1.2	2,165	1.3	406	4.4
1975	2,441	1.5	2,196	1.4	440	8.4
1976	2,440	0.0	2,193	−0.1	434	−1.4
1977	2,427	−0.5	2,178	−0.7	442	1.8
1978	2,409	−0.7	2,157	−1.0	441	−0.2
1979	2,386	−1.0	2,132	−1.2	441	0.0
1980	2,360	−1.1	2,104	−1.3	440	−0.2
1981	2,348	−0.5	2,088	−0.8	436	−0.9
1982	2,342	−0.3	2,080	−0.4	433	−0.7
1983	2,345	0.1	2,080	0.0	426	−1.6
1984	2,371	1.1	2,103	1.1	419	−1.6
1985	2,410	1.6	2,139	1.7	409	−2.4
1986	2,454	1.8	2,180	1.9	401	−2.0

SOURCE:

U.S. Department of Health, Education, and Welfare, Education Division, National Center for Education Statistics. *Projections of Education Statistics to 1986-87.* Washington, D.C.: Government Printing Office, 1978. For 1977 and subsequent years intermediate alternative projections are listed for K-12; and low alternative projections are listed for higher education.

[a] Includes full-time instructional staff with rank of instructor or above in all institutions of higher education.

TABLE 3.–TRENDS IN THE NUMBER OF LIVE BIRTHS AND IN THE AGE 5-17 POPULATION

State and region	Live births, 1978		Population age 5-17 in 1978	
	Number	Percent change from 1973	Number (000)	Percent change from 1973
1	2	3	4	5
NEW ENGLAND	**150,599**	**-3.9**	**2,668**	**-9.3**
Connecticut	35,695	-2.6	669	-11.2
Maine	14,584	-4.8	248	-4.2
Massachusetts	69,078	-7.6	1,242	-10.7
New Hampshire	12,362	11.6	197	0.0
Rhode Island	11,766	-7.1	201	-10.7
Vermont	7,114	12.8	111	-5.1
MIDEAST	**548,784**	**-2.8**	**9,070**	**-10.6**
Delaware	8,945	8.8	130	-11.6
District of Columbia	19,054	-4.3	135	-13.5
Maryland	47,987	1.3	930	-10.5
New Jersey	89,778	-4.0	1,603	-10.0
New York	229,782	-4.8	3,795	-10.4
Pennsylvania	153,238	-0.9	2,477	-11.2
SOUTHEAST	**770,542**	**2.0**	**10,936**	**-4.1**
Alabama	58,738	-1.7	857	-4.8
Arkansas	33,445	2.3	484	-2.0
Florida	112,987	4.7	1,662	-3.3
Georgia	83,784	-7.0	1,181	-3.8
Kentucky	58,359	4.8	784	-4.9
Louisiana	75,659	14.8	969	-4.9
Mississippi	45,583	2.7	596	-3.9
North Carolina	82,583	-3.7	1,238	-4.7
South Carolina	47,198	-1.2	685	-3.1
Tennessee	70,431	2.8	956	-2.8
Virginia	70,418	2.1	1,124	-5.9
West Virginia	31,357	11.4	400	-4.8
GREAT LAKES	**622,135**	**1.1**	**9,364**	**-9.2**
Illinois	172,149	3.2	2,504	-9.1
Indiana	83,595	-0.9	1,230	-8.1
Michigan	136,449	-3.0	2,151	-9.0
Ohio	161,813	0.5	2,416	-10.0
Wisconsin	68,129	8.9	1,063	-9.6
PLAINS	**268,614**	**12.2**	**3,733**	**-9.5**
Iowa	45,071	14.7	643	-9.9
Kansas	34,747	13.5	491	-8.4
Minnesota	62,356	14.9	911	-10.1
Missouri	77,075	7.8	1,042	-8.8
Nebraska	25,216	10.1	343	-9.0
North Dakota	12,112	16.7	148	-10.8
South Dakota	12,037	14.1	155	-11.9
SOUTHWEST	**345,426**	**9.1**	**4,407**	**-0.5**
Arizona	43,004	13.2	531	-0.2
New Mexico	21,988	6.5	297	-3.6
Oklahoma	43,735	10.0	608	-2.1
Texas	236,699	8.5	2,971	0.1
ROCKY MOUNTAIN	**124,467**	**26.5**	**1,381**	**-2.1**
Colorado	44,387	12.8	582	-5.7
Idaho	18,751	34.0	203	1.5
Montana	13,176	17.8	179	-6.3
Utah	40,051	43.3	323	3.2
Wyoming	8,102	37.0	94	5.6
FAR WEST	**490,105**	**20.0**	**6,456**	**-3.7**
Alaska	8,761	31.9	104	8.3
California	356,205	18.5	4,677	-4.4
Hawaii	16,650	8.6	200	-5.2
Nevada	10,868	23.5	148	6.5
Oregon	39,940	25.9	511	-2.7
Washington	57,681	26.9	816	-3.0
50 states and D.C.	3,320,672	5.2	48,015	-6.7

SOURCES:

U.S. Department of Health, Education, and Welfare, Public Health Service, National Center for Health Statistics. "Births, Marriages, Divorces, and Deaths for 1978." *Monthly Vital Statistics Report* 27:12; March 15, 1979.

_____. "Annual Summary for the United States, 1973; Births, Deaths, Marriages, and Divorces." *Monthly Vital Statistics Report* 22:13; June 27, 1974.

U.S. Department of Commerce, Bureau of the Census. *Estimates of the Population of States, by Age: July 1, 1971 to 1977.* Current Population Reports, Series P-25, No. 734. Washington, D.C.: Government Printing Office, November 1978. 19 pp.

_____. *Estimates of the Population of States, by Age: July 1, 1977 and 1978.* Current Population Reports, Series P-25, No. 794. March 1979. 4 pp.

The age 5-17 population projections are highly accurate for at least the next seven years and the age 18-21 population projections are highly accurate through 1994 because both are based on the numbers of children born before 1977.

The population projections listed in Table 1 indicate the basic numbers that will influence enrollment trends and the number of staff. Projections of actual enrollments and/or numbers of teachers require the application of assumptions about the population percentage that will be enrolled and the ratio of students to teachers. Table 1 shows the base line from which these related estimates may be derived.

Trends in teacher employment. It is difficult to project accurately the number of teachers that will be employed for several reasons, e.g., the unknown effects of high levels of unemployment and underemployment, continuing need to improve preschool education-related experiences, increased emphasis on appropriate instruction for handicapped children and youth, increased need to provide instruction for functionally illiterate youth and adults, and the long-term trend toward increasing the number of professional staff per 1,000 students. However, barring a major change in the trend toward lowering the student-teacher ratio, the reductions in numbers of teachers will likely not be as severe as the reductions in the numbers of school-age persons.

National Center for Education Statistics projections assume that the trend toward smaller numbers of pupils per teacher will continue and indicate that the annual decreases in the number of K-12 teachers will probably not exceed 1.3 percent of the number of teachers employed in the previous year (Table 2). However, NCES projections of the numbers of higher education faculty show decreases of at least 1.6 percent beginning in 1983.

Variations Among States

These national population trends probably will not be observed exactly in any one state, school system, or higher education institution. States and localities differ widely in birth rates, population mobility, rates of changes in these factors, and related demographic characteristics. The relative severity of potential enrollment declines among the states can be estimated by combining the rates of recent change in the number of children born, the number of persons age 5-17, and projected numbers of persons ages 5-14 and 15-24 (see Tables 3 and 4).

The states *least likely* to face major enrollment declines include Alaska, Arizona, Idaho, Nevada, Texas, Utah, and Wyoming.

The states likely to have the *most severe* enrollment declines are Connecticut, Delaware, District of Columbia, Illinois, Massachusetts, Michigan, New Jersey, New York, Ohio, and Pennsylvania. These states have the greatest reductions in the number of births, number of persons age 5-17, and projected number of persons age 5-14.

The following states have relatively high reductions in the age 5-17 population and in the projected age 5-13 population, but the recent number of annual births in these states has increased more than in most other states: Delaware, Iowa, Minnesota, and North Dakota. These states may not have long-term declines, especially if recent migration trends are changed.

The states with sharp declines in annual births but with relatively small decreases in the age 5-17 population—which may delay the loss of enrollment potential—are Georgia, Maine, North Carolina, Rhode Island, and South Carolina.

The following states have the most severe outlook for *reductions* in the age 15-24 population: District of Columbia, Indiana, Iowa, Kansas, Michigan, Missouri, North Dakota, Ohio, Pennsylvania, and South Dakota. Between 1975 and 1985 the age 15-24 population in each of these states is projected to decline by at least 9.0 percent. These decreases will not be severe until after 1980 (see Table 4, columns 6 and 7).

In the same 10-year span an *increase* of 3.0 percent or more in the age 15-24 population is projected in these states: Alaska, Arizona, Colorado, Florida, Georgia, Hawaii, Nevada, New Hampshire, and Utah. However, in 1985 the 15-24 age group will be smaller than it is projected to be in 1980 in all of these states (except Georgia and Utah).

The American Council on Education has reviewed the population shifts and migration trends of 18-year-olds enrolled in higher education and projects that the states most likely to lose freshman students between 1975 and 1985 are Arkansas, Connecticut, Illinois, Minnesota, New Jersey, New York, North Dakota, Ohio, and Pennsylvania. The states most likely to have more freshman students during this period are Arizona, Colorado, Delaware, Florida, Idaho, and Utah.

In summary, population declines will be *most severe* in the New England, Mideast, Great Lakes, and Plains states and *least severe* in the Southwest, Rocky Mountain, and Far West states.

TABLE 4.–PROJECTED POPULATION AGE 5-14 AND 15-24 YEARS FOR 1980 WITH PERCENT CHANGE FROM 1975 TO 1989 AND FROM 1975 TO 1985

State and region	Population age 5-14			Population age 15-24		
	Projected 1980		Percent change from 1975 to projected 1985	Projected 1980		Percent change from 1975 to projected 1985
	Number (thousands)	Percent change from 1975		Number (thousands)	Percent change from 1975	
1	2	3	4	5	6	7
NEW ENGLAND	**1,846.2**	**-14.4**	**-20.2**	**2,341.4**	**4.5**	**-2.4**
Connecticut	452.6	-17.6	-25.4	574.2	2.9	-6.0
Maine	174.6	-9.2	-11.5	204.0	5.6	0.2
Massachusetts	861.5	-15.3	-21.7	1,141.7	5.1	-1.9
New Hampshire	135.1	-9.2	-11.6	158.5	8.3	5.1
Rhode Island	144.0	-10.2	-14.2	171.8	1.8	-2.3
Vermont	78.4	-10.8	-14.4	91.2	2.6	-3.0
MIDEAST	**6,310.1**	**-14.5**	**-21.1**	**7,677.4**	**1.5**	**-7.1**
Delaware	91.9	-13.6	-17.3	119.6	4.2	-5.3
District of Columbia	95.6	-13.9	-22.8	138.1	0.6	-9.0
Maryland	664.1	-12.8	-16.9	856.8	7.7	2.3
New Jersey	1,126.8	-13.4	-18.7	1,318.0	4.4	-2.7
New York	2,626.7	-15.1	-22.9	3,178.7	1.1	-7.4
Pennsylvania	1,705.0	-14.9	-21.5	2,066.2	-1.9	-13.0
SOUTHEAST	**7,952.5**	**-5.7**	**-6.2**	**9,458.4**	**4.8**	**-0.3**
Alabama	603.4	-8.1	-10.5	694.7	1.3	-7.3
Arkansas	348.1	-5.9	-6.7	386.1	3.2	-3.6
Florida	1,297.0	0.1	5.5	1,625.7	15.4	14.8
Georgia	886.0	-3.3	-3.2	1,008.5	6.1	6.3
Kentucky	560.2	-7.2	-8.3	661.8	2.9	-4.4
Louisiana	671.6	-10.0	-13.8	776.4	1.9	-6.2
Mississippi	425.5	-6.2	-8.0	463.4	1.0	-7.5
North Carolina	907.5	-5.7	-7.3	1,091.3	2.2	-2.9
South Carolina	501.9	-4.4	-4.2	595.5	2.6	-2.3
Tennessee	667.4	-7.8	-10.1	785.7	2.1	-5.1
Virginia	801.4	-7.8	-10.4	1,068.1	6.2	0.8
West Virginia	282.5	-5.8	-9.5	301.2	-4.4	-13.7
GREAT LAKES	**6,486.6**	**-13.1**	**-17.9**	**7,811.7**	**0.3**	**-10.0**
Illinois	1,741.0	-13.6	-16.7	2,114.0	1.9	-8.4
Indiana	854.2	-12.2	-16.8	1,004.7	-0.3	-10.1
Michigan	1,497.8	-12.7	-17.4	1,785.9	-0.2	-10.1
Ohio	1,671.3	-13.4	-18.8	1,983.7	-2.4	-13.7
Wisconsin	722.3	-15.5	-20.6	924.0	4.1	-5.1
PLAINS	**2,541.8**	**-14.0**	**-17.9**	**3,216.0**	**1.3**	**-9.6**
Iowa	435.0	-15.3	-21.1	527.1	0.1	-10.5
Kansas	335.4	-12.5	-15.6	435.9	-0.9	-11.8
Minnesota	615.3	-16.1	-21.2	786.3	2.5	-8.0
Missouri	712.5	-12.7	-15.7	898.0	1.9	-9.0
Nebraska	238.6	-12.0	-13.6	305.3	3.3	-6.8
North Dakota	99.2	-14.3	-17.1	130.8	0.8	-12.6
South Dakota	105.8	-13.6	-16.2	132.6	-1.3	-15.2
SOUTHWEST	**3,212.1**	**-3.1**	**-0.5**	**3,746.9**	**6.2**	**1.3**
Arizona	417.5	3.4	10.8	482.5	14.5	14.4
New Mexico	212.8	-6.6	-5.2	255.8	9.0	1.5
Oklahoma	428.8	-5.4	-4.4	506.7	1.9	-5.6
Texas	2,153.0	-3.5	-1.3	501.9	5.3	0.5
ROCKY MOUNTAIN	**1,014.8**	**-2.8**	**0.3**	**1,248.4**	**8.0**	**2.6**
Colorado	428.5	-5.3	-2.6	578.0	10.1	5.3
Idaho	149.2	-1.0	2.2	165.9	6.3	1.6
Montana	122.6	-10.0	-10.1	151.1	4.2	-6.3
Utah	250.3	5.4	11.9	275.0	7.1	3.4
Wyoming	64.2	-4.9	-4.0	78.4	7.1	0.3
FAR WEST	**4,531.7**	**-9.0**	**-10.3**	**5,734.5**	**4.9**	**-1.1**
Alaska	77.4	-0.1	2.7	102.3	20.4	21.4
California	3,281.1	-9.5	-10.8	4,200.4	4.6	-1.6
Hawaii	147.5	-5.5	-4.4	202.1	29.5	24.0
Nevada	105.8	-2.4	-1.3	124.9	17.3	18.1
Oregon	361.2	-6.7	-6.8	427.1	1.8	-4.3
Washington	558.7	-10.9	-14.0	677.7	-0.9	-8.1
50 states and D.C.	33,895.8	-10.2	-13.0	41,234.7	3.2	-4.2

SOURCE:
U.S. Department of Commerce, Bureau of the Census. *Illustrative Projections of State Populations by Age, Race, and Sex: 1975 to 2000.* Current Population Reports, Series P-25, No. 796. Washington, D.C.: Government Printing Office, 1979. Series II-B projections are listed; these incorporate the 1970-75 interstate migration trends.

Variations Within States

Although two persons in three (67.0 percent) live in a metropolitan area, the population growth rate in these areas since 1970 has decreased from being more than to being less than that in nonmetropolitan areas. The average annual percent change in total metropolitan population between 1970 and 1978 was 0.5 percent compared with 1.5 percent between 1960 and 1970. Between 1970 and 1978 the average annual percent increase in metropolitan population outside of central cities was 1.5 percent, down from 2.4 percent between 1960 and 1970. On the other hand, between 1970 and 1978 in the central cities of metropolitan areas the average annual change in total population was minus 0.6 percent compared with plus 0.6 percent during the 1960's. Between 1970 and 1978 the average annual percent increase in nonmetropolitan areas was 1.4 percent, up from the 0.7 percent observed between 1960 and 1970.

The total population growth between 1970 and 1978 was greater in metropolitan areas outside of central cities (9.1 million) than in nonmetropolitan areas (7.7 million), while the central cities of metropolitan areas lost 3.2 million persons.

The metropolitan population growth rate is greater in areas with less than 500,000 persons than in the larger centers, and the growth rate is greater among areas in the South and West than it is in the Northeast and North Central regions.

In nonmetropolitan areas, the counties with highest numerical growth are those adjacent to metropolitan areas, those with 10 percent or more net immigration of persons age 60 or older, those with 30 percent or more of the population employed in manufacturing, and those where a senior state college is located. Counties that are entirely rural had a population increase of 6.1 percent between 1970 and 1974 compared with a population decrease of 4.3 percent between 1960 and 1970.

Although birth rates and population migration factors of individual school districts probably do not parallel the estimates for the states in which they are located, knowledge of national, regional, and state conditions may be useful in evaluating the significance and stability of local trends.

Teacher Lay Offs

The number of teaching positions opened annually through attrition (deaths, retirements, transfers to nonteaching assignments, entry into other occupations, personal or family responsibilities, etc.) has been between 7 and 9 percent of the staff in grades K-12 and between 5 and 6 percent of the staff in higher education. Re-entry of experienced teachers normally has reduced the net loss to 5 percent of K-12 teachers and to 3 percent of higher education faculty. Therefore, barring a significant reduction in these attrition rates, the enrollment declines should not require the *forced* separation of K-12 teachers (some positions opened by attrition simply would not need to be filled). However, the severe reductions in the age 18-21 population coupled with the relatively low attrition rates of higher education faculty make it likely that some regular faculty will lose their positions as a direct consequence of enrollment declines.

Continuing Teacher Job Shortage

For at least the next 10 years, most teaching vacancies at all levels will be created by the need to replace those leaving active teaching service. Population projections indicate that some additional teachers will be needed for the projected increase in the numbers of elementary school students beginning about 1986. Therefore, a fairly stable number of teaching job openings will occur annually for five more years, followed by some increases that will return the total number of teachers to 1977 levels by 1986.

More higher education graduates enter teaching than any other occupation. (Employment in K-12 teaching was reported by 15 percent of the employed 1975 bachelor's degree graduates and by 36 percent of the employed 1975 master's degree graduates. Employment in educational institutions was reported by 54 percent of all the employed 1973 doctorate recipients.) The number of graduates receiving the bachelor's degree is expected to peak in 1982; master's degree, in 1984; and doctor's degree, in 1985. After these peak years, a slight increase in the percent of graduates entering education during the peak year will be needed just to fill the same number of annual teaching vacancies.

Small annual increases in the number of teaching positions over the previous year are likely in the elementary grades beginning about 1985; in secondary grades, about 1990; and in higher education, about 1995 (see Tables 1 and 2). However, the age 5-13 population will not rise again to the 1977 level until 1990; the age 14-17 population will not return to 1977 levels during the rest of this century; and the age 18-21 population will drop back to the 1977 level about 1982 and remain below that level until after the year 2000.

Therefore, the number of additional teachers needed for expanded school and college enrollments over the next 15 years is not likely to create significant annual demands for new graduates expecting to enter this field, with the possible exception of elementary school jobs in the late 1980's.

Despite recent significant reductions in the proportions of higher education graduates preparing to enter teaching, considerably more qualified new graduates are seeking teaching jobs in 1979 than there are jobs available at all levels—kindergarten through graduate school. This imbalance, in existence for at least the past five years, is likely to continue for five more years before moderating during the subsequent 10 years as the total numbers of graduates reduce to the levels of the late 1960's.

For at least 10 more years there will probably be an ample annual supply of qualified applicants for all teaching vacancies, barring major changes in projected birth rates, the total employment growth rate, working conditions and salaries in education compared with those in other occupations, and improvement in the quality and scope of education. However, if recent declines in the attractiveness of beginning teachers' salaries and working conditions are not reversed, the annual surplus in elementary-secondary schools may end within the next five years. If the number of *attractive* jobs for beginning teachers increases significantly in the mid-1980's, a teacher shortage is not likely because larger proportions of graduates will be prepared to teach. For example, if the percent of all bachelor's and first-professional-degree graduates who prepare to teach returned to the 1968 level, at least 200,000 additional, prospective beginning teachers would be available annually.

Regardless of the assumption made about how many people who were unable to secure teaching jobs in the heaviest surplus years (1972 to 1984) may be available for education employment in the late 1980's, little or no evidence exists that a shortage of qualified teacher applicants will occur in any year during the next decade.

Private School Enrollment

The U.S. Bureau of the Census reports that the numbers enrolled in private schools and colleges represent a slightly higher proportion of total enrollments in fall 1978 than they did in fall 1976. Enrollment in private institutions is reported for 11.4 percent of those enrolled in elementary schools; 8.0 percent, in secondary schools; and 24.5 percent, in higher education. The proportions enrolled in private institutions at each level were lower in 1969 through 1978 than in the years immediately before 1969. For example, in 1968 private institution enrollment represented 12.5 percent of those enrolled in elementary schools, 9.6 percent of those in secondary schools, and 27.3 percent of those in higher education.

At the elementary and secondary school levels the slight increase in the percent enrolled in private school in fall 1978 resulted mainly from a decrease in public school enrollment rather than from an increase in numbers enrolled in private schools.

Guidelines for Local Association Planning

The most desirable approaches to alleviating declining enrollment problems probably are not readily acceptable to many school systems because of financial constraints and/or high unemployment. Prompt and enlightened action by the local association is necessary to assure that the advantages of adopting desirable alternatives are fully appreciated.

Guidelines that every local association should consider as it plans a response to the projected enrollment declines are listed below largely in K-12 terms, but the concepts are equally applicable to higher education institutions.

Review Local Conditions. Keep up-to-date on changes in population, school enrollment, and the number of births in your school district. Well organized school systems maintain an annual tabulation of the relationship of the number of 6-year-olds being enrolled to the number of children born to parents living in the school district six years earlier. Also, school systems must project their enrollments to support long-term planning for budgets and buildings. Studying this information will help the local association assess the extent and timing of declining enrollment problems.

Guard Against Regressive Attitudes. Be alert to the possibility that stagnation, restriction, regression to lower standards, and insecurity may result from low-growth or negative-growth trends in school-age population. (These trends are accompanied by high unemployment and underemployment, significant shifts in other segments of the economy, and severe financial constraints on state and local governments.) These attitudes cause problems because they affect teachers as well as the general public.

The local association must stimulate positive thinking, point to actions needed to improve the quality of the schools, cite the opportunities

opened by the increased supply of qualified personnel to alleviate traditional deficiencies in education as well as in other public services, and publicize innovative approaches to solving educational problems.

Increase the Effectiveness of Association Communications. Success in maintaining and improving the quality of education depends on how well teachers and the public are kept informed on local conditions, issues, and desirable alternatives. The local association should produce the information needed by members and the public to make the decisions needed to achieve association objectives.

Update Goals for Improving the Quality of Schools and of Teaching. Because more qualified personnel are now available to support immediate improvements in all educational services, the local association should review and update its goals for improving the quality of schools and of teaching. Accrediting agencies, leading scholars, professional associations, and learned societies have all issued suggested standards.

The following personnel-related areas may also be ripe for immediate improvements.

Scope of offering

- Are students who have difficulties in the typical academic classroom offered alternative instruction?
- Does the school district offer a sufficient array of vocational, technical, fine arts, and practical studies?
- Are students who have learning handicaps given specialized instruction?
- Are preschool-age children being prepared for an effective response to the first-grade classroom?
- Are the basic literacy needs of the local adult population being met?
- Are the employment and vocational needs of the local adult population being met?

Student services

- Do certified nonteaching professional personnel screen students who have learning difficulties and advise the school how to improve the students' performance?
- Does the school district provide enough counselors, librarians, and health services personnel?
- Do remedial specialists provide individualized instruction for students who require more attention than can be made available in the regular classroom?

Instructional setting

- Are class sizes at levels most conducive to effective instruction?
- Is the teacher work load within reasonable limits for the most effective instruction?

Staff development

- Does the school district provide teachers with adequate released time for professional growth (attending professional meetings, visiting other teachers who have similar assignments, consulting with supervisory personnel and with specialized professional personnel, etc.)?
- Does the school district provide teachers with long-term leave to enroll in advanced or specialized courses, engage in work-related experiences, prepare instructional materials, serve as resource persons in evaluation and planning, participate in college and university evaluations and planning, etc.?
- Does the retirement plan provide teachers with incentives to retire when they reach the age of early or normal retirement?